

UNIVERSITY OF WASHINGTON  
SEATTLE, WASHINGTON 98195

School of Public Health and Community Medicine  
Department of Environmental Health, SC-34

November 10, 1981

Mr. Ian Walker  
Industrial Relations Director  
Alaskan Copper and Brass Co.  
P.O. Box 3546  
Seattle, WA 98124

Dear Mr. Walker:

In addition to the industrial hygiene evaluation made on April 28 and April 30, 1981 and reported on October 7, 1981, two wastewater samples were taken at the request of Mr. John Cammett. Mr. Cammett was interested in the pH and contaminant concentration in the supernatant and the sludge.

Two samples were taken, one of the liquid only and one of the liquid and sludge. The results are presented in Table I.

As can be seen there, the pH is 8 in the sample containing both liquid and sludge and 7 in the sample of liquid only. No organics were found in either sample. A number of metals were found in both samples, with analysis by inductively coupled plasma spectrometry following acidification and filtering. In every case, the metal concentration in the liquid alone was substantially lower than in the combined liquid and sludge sample.

I hope that this report is of value to you. Call me at 543-9711 if you have any questions.

Sincerely,

*Michelle Malczewski*  
Michelle Malczewski  
Industrial Hygienist II

Approved: *Peter A. Breysse*  
Peter A. Breysse, Assoc. Prof.

MM:se  
Enclosure  
cc: Steve Cant, L&I

TABLE I

Contaminants - Sump Sludge and Liquid

Sample #1 (Sludge and liquid)  
 pH = 8  
 organics - none detected

Sample #2 (liquid only)  
 pH = 7  
 organics - none detected

Metals (in mg/ml)

	<u>Beryllium</u>	<u>Calcium</u>	<u>Cadmium</u>	<u>Cobalt</u>	<u>Chromium</u>	<u>Copper</u>	<u>Iron</u>	<u>Magnesium</u>	<u>Manganese</u>
Sample #1	0.119	72.57	0.063	1.38	62.26	80.66	380.1	27.14	10.42
Sample #2	none detected	1.10	none detc.	none detc.	0.866	1.09	4.29	0.337	0.120

	<u>Nickel</u>	<u>Phosphorous</u>	<u>Lead</u>	<u>Antimony</u>	<u>Selenium</u>	<u>Silicon</u>	<u>Thallium</u>	<u>Zinc</u>
Sample #1	75.79	5.51	7.89	3.90	0.926	134.9	1.69	6.62
Sample #2	0.659	none detected	none det.	none det.	none det.	3.77	none det.	0.091